



Sleepwalking through the Anthropocene

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Angus, I. *Facing the Anthropocene: Fossil capitalism and the crisis of the earth system* 2016 Monthly Review Press 277 pp. \$19.00 (paperback).

Davies, J. *The Birth of the Anthropocene* 2016 University of California Press 234 pp. £22.95 (hardback).

Godfrey, P. and Torres, D. (eds) *Systemic Crises of Global Climate Change: Intersections of Race, Class and Gender* 2016 Routledge 332 pp. £90 (hardback), £27.99 (e-book).

Hamilton, C., Bonneuil, C. and Gemenne, F. (eds) *The Anthropocene and Global Environmental Crisis: Rethinking Modernity in a New Epoch* 2015 Routledge 187 pp. £34.99 (paperback).

Malm, A. *Fossil Capitalism: The Rise of Steam Power and the Roots of Global Warming* 2016 Verso 488 pp. \$19.99 (paperback).

Moore, J. (ed.) *Anthropocene or Capitalocene? Nature, History, and the Crisis of Capitalism* 2016 PM Press 222 pp. \$21.95 (paperback).

Wark, M. *Molecular Red: Theory for the Anthropocene* 2015 Verso 280 pp. £9.99 (paperback).

Abstract

This article reviews seven recent books on the Anthropocene, from which three major narratives are extracted. First, while posing problems, the Anthropocene is seen as a 'great opportunity' for business, science and technology; second, it is recognised that the planet and humanity itself are in danger, but if we are clever enough we can save ourselves and the planet with technological fixes; third, we are in great danger, humanity cannot go on living and consuming as we do now, we must change our ways of life radically – by ending capitalism and creating new types of societies.

Keywords: Anthropocene; Capitalocene; Anthro-scene; climate change; consumerism; Earth System Science

At a meeting of the International Geosphere-Biosphere Program in 2000 the chemistry Nobel Laureate Paul Crutzen became agitated by the continual use of the term ‘Holocene’ to describe the current geological epoch. Evidence had been accumulating for decades that human activities were interfering significantly with natural geological processes. This was forcing some scientists to conclude that the earth was moving into a new geological epoch, which Crutzen labelled the Anthropocene. The term now appears in the titles of several academic journals, conferences, dozens of books, and hundreds of articles, in newspapers, magazines, websites and blogs, as well as art exhibitions, novels, and the heavy metal album, *The Anthropocene Extinction*. Lorimer (2017) terms this extended version the ‘Anthropo-scene’.

All of the books under review tell us that rarely has a scientific term moved so quickly into wide acceptance and general use –while not yet officially part of the scientific canon, it is in the first stages of institutionalization. It is important to note that the terms Anthropocene and climate change/global warming are not synonyms, though they are often used as such (for example, in the expression ‘anthropogenic climate change’). A sociology of the Anthropocene would be much wider than a sociology of climate change. Hamilton explains this in terms of the paradigm shift from old ideas of the environment to the new Earth System Science, whose object is not a collection of ecosystems but the whole Earth as an evolving system beyond the sum of its parts (Hamilton 2015).¹ The challenge for sociologists is not so much making ‘sociological analyses’ of human impacts on the various components of the Earth System, but to highlight what sociological assumptions these impacts reveal about the possibilities of social life, human and other, on the planet. The books reviewed show that social scientists (though not yet many sociologists) are already researching the implications of various ideas of the Anthropocene for family, education, politics, social movements, class, gender, race, law, work, culture, care, history, time, space, science, technology, language, the arts, religion, and what it means to be human on this endangered planet.²

What then, can Anthropocene studies bring to sociology and what can sociology bring to the Anthropocene? Three main narratives have emerged:

- (1) While posing problems, the Anthropocene is a ‘great opportunity’ for business, science and technology, geoengineering, and so on.
- (2) The planet and humanity itself are in danger, we cannot ignore the warning signs but if we are clever enough we can save ourselves and the planet with technological fixes (as in 1).
- (3) We are in great danger, humanity cannot go on living and consuming as we do now, we must change our ways of life radically – by changing/ending capitalism and creating new types of societies.

The first two positions have been dubbed ‘good Anthropocene’, and are promoted by many earth scientists, the third is characteristic of many social scientists, especially on the Left. For example, the important and alarming book by Angus opens with a poignant poem about waking from a dream in which the poet’s great grandchildren ask ‘what did you do/once you knew?’ about the plunder of the planet. Angus leaves little room for doubt that the Anthropocene is upon us and he presents a balanced account of scientific controversies around the concept, notably chronology, for which there are three main options – very ancient, the industrial revolution fuelled by fossil capitalism, or since the post-Second World War (conceptualized as the ‘Great Acceleration’), painting a vivid picture of how ill-prepared we are to adapt to working and living in extreme climates. He identifies the main culprits responsible for the perilous state of the planet and all who inhabit it – namely those who profit from fossil fuel capitalism and the rest of us who waste so much energy and consume so much stuff. Here Angus explains with commendable clarity the reasons for, expressions and consequences of the growth imperative/obsession of global capitalism. His chapter 11, ‘We are not all in this together’, connects the toxic mix of global inequalities and anthropogenic climate change to devastating effect. ‘The line is not only between rich and poor, or comfort and poverty: it is between survival and death’ (176). He mobilizes E.P. Thompson’s ‘exterminism’ thesis, evidence from Hurricane Katrina, the Pentagon on ‘An Abrupt Climate Change Scenario’, Hardin’s ‘lifeboat ethics’, and Mike Davis on ‘Earth’s first-class passengers’ to argue that if the worst happens, the rich and powerful are already preparing how to look after their own and abandon the rest of humanity.

Less successful, however, is his concluding section ‘The Alternative’ which presents no genuine alternative to what the various strands of the environmental movement are already doing, certainly with important small victories but little prospect of meaningful change in what is an increasingly urgent and desperate global crisis. The lack of credibility in the alternative that Angus proposes is largely due to his inability to see with sufficient clarity that the old failed revolutionary strategies are even less likely to succeed in the present era when those who control capitalist globalization and the hierarchic state intrinsic to its existence wield so much material and cultural-ideological power. He misses the opportunity to engage with the emerging concept of degrowth. There are, admittedly, many good ideas and manifestos around, and while he acknowledges that the capitalist state is part of the problem, his faith in the prospects of the eco-socialist state is unconvincing. Sociologists of social movements have been slow to engage with the Anthropocene.

The main focus of the Davies book is that the Anthropocene forces us to take a very long view of the environmental crisis, which he sees as one more product of late twentieth-century neocatastrophism. He paints a vivid picture of the geo-history of the deep past – anything but static, with five mass

extinctions and 38 geological epochs preceding the Anthropocene. Though Davies often comes across as more lyrical than critical, he has the knack of inserting killer facts at strategic points (three examples: yes the planet was warmer 125,000 years ago, but cooler one million years ago; between 1970 and 2010 there was a decline of 52 per cent in individual non-domesticated vertebrates alive in the world; while GDP and foreign direct investment do not fossilize, they affect the things that do). Like Angus, while problematizing the pre-history of the Anthropocene, he agrees that the Great Acceleration after 1945 undeniably implicates fossil capitalism in the present emergency. Much more embedded in deep time, he barely attempts to theorize this, while for Angus it is at the centre. Davies tells us that he ‘sought to avoid speaking of humankind as an undifferentiated whole’ (56) while Angus (as noted above) attempts, with some success, to build a Marxist class critique of the structure and dynamics of the Anthropocene epoch.

In his edited book *Anthropocene or Capitalocene?* Jason Moore recounts a seminar in 2009 with Andreas Malm, who declared: ‘Forget the Anthropocene, we should call it the *Capitalocene*’. Moore argues that the Anthropocene is a worthy point of departure but inadequate as a historical rather than a geological concept. Capitalocene, ‘an ugly word’, signifies capitalism as a way of organizing nature, clearing the way for new conceptions of a multispecies, capitalist world-ecology.³ The first part of this collection includes Haraway’s legendary ‘Staying with the Trouble’ project (see <https://vimeo.com/97663518>). She levels seven objections to the Anthropocene concept, but concludes: ‘in so far as the Capitalocene is told in the idiom of fundamentalist Marxism, with all its trappings of Modernity, Progress, and History, that term is subject to the same or fiercer criticism’ (52–3). Moore’s own chapter argues that capitalism was built on ‘cheap nature’ and excluding most *humans* from humanity – world-ecology is not ecology of Nature but ecology of the *oikeos* (human/extra-human nexus). He particularly targets the Cartesian dualism of Nature/Society which, he claims, has created an ecologically unsustainable ontology and epistemology. Both Moore and Haraway appear to make the post-humanist argument that there is nothing distinctive about humans and that humans are destroying the planet. In his zeal to replace Anthropocene by Capitalocene, Moore (81), in my view, unfairly criticizes Malm, Hamilton, and especially Angus for ‘profound and wilful misunderstanding’ of the issues, but the misunderstanding is more Moore’s (compare Angus, 231ff.).

There is good reason to claim that the Anthropocene is an apt label for the human impact on planet Earth. It is inclusive of the human enterprise, and though different levels of responsibility can be apportioned, most people on Earth are complicit via the culture-ideology of consumerism. Rebranding Anthropocene as Capitalocene conveniently lets anti-capitalists off the hook to fly around the world critiquing capitalism and making their own ecologically destructive consumer choices (present writer included). We are living in the

Anthropocene, and it is taking place within and being intensified by the system of capitalist globalization fortified by hierarchic states. Chapters by McBrien on catastrophism, Altwater on geoengineering, Hartley on culture, and Parenti on the role of the state in environment-making all provide strong evidence that global capitalism makes anthropogenic damage to the planet worse, but all they prove is that an exit from capitalism is a necessary though not sufficient condition for solving the problems of the Anthropocene. Most of the chapters in the Moore collection argue that left politics must come up with strategies to engage and attempt to transform capitalism and the state, that is, keep doing the same things that have failed with sometimes disastrous consequences for the last two centuries! Faith in the emancipatory prospects of some sort of eco-socialist state (a faith shared by Angus) seems threadbare.

In the collection edited by Hamilton et al. eight of the fifteen contributors (including two of the editors) work in France and the influence of the first notable Anthropocene conference for social science and humanities scholars, at Sciences Po in Paris in 2013, permeates the book. Stengers (a chemist and philosopher by training) tells us that the invitation circular for the conference proclaimed 'Gaia [the bastard child of climate sciences and ancient paganism] has reawakened' provoking the reaction 'you can't be serious'. But she, and many others, are serious.⁴ The editors assert that 'new entities' emerge when human and Earth history collide. Bonneuil, for example, argues that we need a plurality of narratives from many voices rather than a single grand narrative. Latour accepts that the Anthropocene is a source of confusion, but a welcome source – stimulating for intellectuals but, one might observe, not so good for future prospects of life on Earth. The chapter by Hamilton (one of the most successful popularizers of the Anthropocene concept) sets out eight rather general propositions, including a call for social scientists to become geophysicists. Hornborg mobilizes the theory of unequal exchange in the world-system to connect the Anthropocene (though he prefers the Technocene) and the political economy of so-called development. He also argues that 'to acknowledge that Nature and Society are inextricably intertwined all around us – in our bodies, our landscapes, our technologies – does not give us reason to abandon an analytical distinction' (58), undermining Gaia-thinking and post-humanism. He also provides a thought-provoking analysis of the role of money, but fails to see that the logical conclusion to his argument is that we need to get rid of money altogether. While much of the literature on the Anthropocene (and climate change) revolves around the apparent novelty of these ideas Fressoz, in his poignantly entitled chapter 'Losing the Earth Knowingly', demonstrates that all were critically analysed from the eighteenth century onwards. He concludes: the 'Anthropocene and the mess we are in . . . proceeded despite an understanding of its consequences . . . The historical problem is to understand how modernity became "disinhibited" in its relation to nature' (81).

How this could have happened is taken up, obliquely, by Cochet (a former environment minister in France, latterly an MEP): ‘Cognitive dissidence is at the root of Global Climate Change denial. . . It is this denial that ensures that Apocalypse is near’ (119). Both Stengers and Latour engage with the science-politics of the Anthropocene. Stengers shows that as scientists were prepared to go public on the Anthropocene before all the results were in (waiting could be catastrophic) the deniers could keep the debate going – who do we believe: merchants of fear or merchants of doubt? Stengers argues: ‘why not accept that Gaia “exists” for her own sake [as a new type of scientific being] at a time when the Market is accepted as such?’ (136). Is this simply a new form of anthropomorphism? Gaia is referred to as ‘she’, sometimes ‘it’, never ‘he’, and with human feelings and motivations. Latour keeps this conversation going with an interesting analysis in terms of agnotology (the study of ignorance). Science and politics are both frail human endeavours, he says, and we need to move from ‘science-versus-politics’ to ‘politics-with-science’, however risky. Anthropocene politics ‘is not a rational debate . . . [it is] incredibly easy to make *two sides* emerge even when there is only one’ (147). It is a war but peace might come via ‘Gaia-politics’ (‘or carbon theology’), the usual Latour mix of flashing insight and baffling opacity. The common theme that the Anthropocene challenges the discourse of modernity (and now globalization) will resonate with many sociologists.

Molecular Red is certainly the most original book of those under review. Wark sets out his stall dramatically: ‘this is the end of pre-history, this moment when planetary constraints start really coming to bear on the ever-expanding universe of the commodification of everything . . . that some now call the *Anthropocene*’ (xi). His new critical theory offers some surprises, namely Alexander Bogdanov and Andrey Platonov, Donna Haraway and Kim Stanley Robinson. Both Bogdanov (author of the utopian novel *Red Star* [1908], the ‘founding text of Soviet science fiction’) and Robinson (author of the ‘Red Mars’ trilogy), are mobilized to explain the ‘Red’ of the enigmatic title. For the ‘molecular’: ‘The Anthropocene is a series of metabolic rifts, where one molecule after another is extracted by labour and technique to make things for humans, but the waste products don’t return so that the cycle can renew itself’ (xiv). Wark discusses at length Bogdanov’s tektology (a metaphoric machine for organizing nature) and proletkult: ‘a movement with a mission: to *change labor*, by merging art and work; to *change everyday life*, by developing the collaborative life within the city and changing gender roles and norms; and to *change affect*, to create new structures of feeling, to overcome the emotional friction of organizing the labor that in turn organizes nature around its appetites’ (35). This begins with the labour point of view, nature as that which labour encounters. Platonov’s insight was that as labour presses down on nature, nature presses down even harder on labour.

Almost seamlessly, Wark makes connections with Cyborg Haraway and her History of Consciousness Program at UC Santa Cruz – seen as the nearest



thing in the USA to a tektological research programme. Robinson provides a glowing blurb for the front cover, and Wark returns the compliment in his lengthy sociological analyses of all three volumes of the 'Mars' trilogy – red, green and blue. Of particular interest, is the idea of terraforming (making planets more like Earth) a contentious issue for Robinson's Martian colonists. In the Anthropocene it is also a contentious issue for planet Earth expressed, for example, in the light maps of Earth at night inspiring ideas of planetary urbanization, and the increasing pace of megaprojects (Trump's 'infrastructure for America', the Chinese 'road and belt', and nearer home the vanity HS2 project). Terraforming is also now available as a rather expensive board game. The one theme that stands out in Wark's illuminating book is his systematic connection of the labour point of view with all the content he discusses – notably, ontologies, the space between subject and object, collectivism and individualism, geology of the Anthropocene.

Much of the literature deals rather sketchily with the plight of 'ordinary people' in the Anthropocene and, as the ongoing arguments about dualism demonstrate, connections between the usual sociological categories (notably race, class and gender) are often difficult to clarify. This is the problem that Godfrey and Torres place at the heart of their edited volume, posing questions about how the method of intersectional analysis could pull all the aspects of the Anthropocene together in sociologically fruitful ways, and (I might add) how the Anthropocene concept could pull all the aspects of intersectional analysis together in sociologically fruitful ways, in particular when engaging with issues of injustice and inequality. They argue that 'intersectionality is *the* holographic process' (3) as applied to sociology, providing a 'window with memory'. It is not entirely clear if this is one more version of the totalizing vision of Hegelian Marxism but, whatever is intended, it is an intriguing metaphor.

As I pointed out at the beginning of this essay, the terms Anthropocene and climate change/global warming are not synonymous, though they are often used as such. Godfrey and Torres argue: 'With the advent of anthropogenic Global Climate Change (GCC) and the concurring acts of ecological-social destruction, the vast conceptual veil perpetuating society's ultimate illusion that the fate of the human species is somehow separate from the fate of the Earth is tearing' (1). I point this out only to express my own opinion that substituting Anthropocene for climate change would further strengthen the argument.⁵ The book is a mixture of conventional scholarly chapters, paintings, cartoons, poems, and plays, segmented into themes of Chaos, Air, Earth, Fire, and Water (echoing pagan chants) suggesting that pagans and indigenous people may be better equipped to understand the Anthropocene than 'moderns', a theme that Harris takes up in his chapter on the political ecology of Kallawayaya traditions in Bolivia. The only other chapter to engage with the Anthropocene explicitly is Caputi's 'Mother Earth meets the Anthropocene' which critically re-evaluates both ideas, rejecting entirely the Anthropocene as more gendered, racialized,

sexualized, and classed. She argues convincingly that we can all learn from traditional ecological knowledge. The editors are realistic on the complexities of their methodology, acknowledging that there is no hierarchy of oppressions, and that working intersectionally raises questions of what to include.

This methodological reflexivity is fortified by a chapter by Bacon on 'Rush Limbaugh and the Expanding Culture War' (exposing the 'white male' problem in the USA) which probes a general theory of climate change denial on the lines of the much more researched Holocaust denial via detailed discourse analysis of transcripts. Godfrey (in 'Hegemonic masculinity') mobilizes Connell's classic work, briefly but to great effect. In her chapter on 'embodiment' Sasser discusses a blog by Lisa Hyman in 2011 ('I am the population problem') which argues that simply living in the USA as a middle-class woman is environmentally unsustainable. Sasser sees this as a mistaken frame for the embodiment of environmental crisis. This is an interesting contribution to the Anthropocene/Capitalocene debate, as is Black's: 'I write as a white male resident in Canada ... Although I am not an executive or a statesman, I am nevertheless at least complicit in injustices that are important in climate struggles' (173). Al Duvernay, the oil industry geologist who features in the excellent documentary film on climate change, 'Age of Stupid', explains his own second thoughts. Of particular interest for sociologists (of education, and others), Patricia Widener and her colleagues in Florida analysed climate change action through the prisms of intersectionality, public sociology and critical eco-pedagogy. Five narratives are presented about the effects of classroom discussions on students – all providing food for thought for anyone who feels a responsibility to make sociology (and education in general) more than a purely intellectual exercise. Space restrictions preclude mention of several other useful contributions to this rich volume.

I have kept for last a book that mentions the Anthropocene only in passing (and then to dismiss the term in favour of Capitalocene) because of its major influence on how climate change and the Anthropocene have been conceptualized. Andreas Malm's *Fossil Capital* has been acclaimed by many – an assessment with which it is easy to agree. The central thesis, elaborated in chapter 3, is simple enough – the source of energy via prime movers has three dimensions, each with its own spatiotemporal profile: *flow* (wind, water); *animate power* (conditioned by metabolism; human labour, horse power etc.); *stock* (relics of past solar energy – oil, coal, gas). The central research question is why and how coal-fired steam power (stock) replaced water-powered mills (flow) during the industrial revolution in Britain. The result: 'Global warming is the unintended by-product par excellence' (1). The fossil economy is the totality and Malm forefronts the labour point of view, not a matter of searching for climate in history, but for '*history in climate*' (6). The hypothesis: 'steam arose as a form of power exercised by some people against others' (36). However, rich as is his historical analysis his conclusions are

disappointingly conventional. A cursory dismissal of scaling-down does not mention the burgeoning degrowth or Transition Towns movements (I would have thought that the zero-carbon strategy of the latter would be of interest to him).

Malm commends Naomi Klein's book *This Changes Everything* as 'magnificent' and, indeed, it is magnificent in many ways but like Malm and so many others writing about climate change and the Anthropocene she argues: 'the most powerful lever for change in the Global South is the same as in the Global North: the emergence of positive, practical, and concrete alternatives to dirty development that do not ask people to choose between higher living standards and toxic extraction' (Klein 2015: 413). This raises cheers at public rallies. This is what people want to hear. This is a refined radical version of 'good Anthropocene'. Paradoxically, if you read these seven books carefully, this is one of the messages that you will take away, the other is that it is a fantasy. If we really want life on the planet to survive, we will need to choose. Professional sociology is often and increasingly criticized for being too insular, for focusing on the minutiae of social interactions and failing to notice the elephant in the room or even the room itself. While the triumphal march of globalization studies has gone some way to counteracting this, there is very little attention paid to planetary issues. This is the main challenge that the Anthropocene throws up for sociologists in their own lives and (for those who take the idea of public sociology seriously) in their responsibilities as professionals, teachers and scholars facing up to the uncertain future.

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Notes

1. For a critique of Hamilton, see Maslin and Lewis (2015). For the scientific establishment, the most authoritative statement is probably Steffen, Grinevald, Crutzen and McNeill (2011).

2. One of the earliest articles on the Anthropocene in a sociology journal was on disasters (Clark 2014). A recent flurry of papers in the *European Journal of Social Theory* mainly focuses on unpacking the concept. For its presence in environmental sociology see Bowden (2017), Burns and Caniglia (2017).

3. For an alternative Marxist account of debates around ecology and the Anthropocene, see Foster (2016).

4. In the seven books reviewed, index items for 'Gaia' were as follows: Hamilton et al. 19, Moore ed. 7 (all in Haraway chapter), and none in the rest.

5. I am currently co-ordinating an international research project to establish if and how ideas of the Anthropocene are represented in mass circulation media in local languages around the world. This will test my hypothesis that almost all of the debates around the Anthropocene occur within academic and creative arts bubbles, and rarely reach most people. The detoxification of 'climate change' in the mass media has been thoroughly researched (see, for example, Boykoff 2011). Ignoring the Anthropocene is less arduous.

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